

Work Order ID 80556

February 23-12 8:55:56 AM

80556

Page 1

Item ID: D350-636-012

Accept

N900040100

Setup Start

NS1

Revision ID:

Item Name: Skidtube RH

Stop

NS2

Start Date: 23/02/2012 Start Qty: 1.00 *1*

Cust Item ID:

Required Date: 08/03/2012 Req'd Qty: 1.00 *1*

Customer:

Reference:

Approvals: Process Plan: M.L.J

Date: 12/02/13

Tooling:

Date:

Run Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D2750	F								
D3492	C								

100

0.00

100

DOCUMENT CONTROL

DC

Memo 0.00

Document Control

Photocopy blue file and type labels per PPP D350-636-012 CHG 006

H for M.L.J-12-4-3

S. Zelby

B 80556

W/O:

WORK ORDER CHANGES

DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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NOTE: Date & initial all entries

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Start Date: 23/02/2012 Start Qty: 1.00 *1*

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Cust Item ID:

Customer:

Reference:

Approvals:	Process Plan:	Date:	Tooling:	Date:	Run	Start	*NR1*
	QC:	Date:	SPC (Y/N):	Date:		Stop	*NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
110		0.00							
110	Skidtubes								
Skidtubes	Memo	0.00							
Skidtubes	1-Pick D2600-3 Bent								
	2-Deburr FWD and AFT ends, remove bending marks. Scribe batch# inside AFT end per dwg D2750								
	3- Drill pilot holes for blade fitting bolt holes using DT8983. Open to 0.500", deburr.								
	4- Locate DT8329 off of blade fitting bolt holes and drill pilot holes for blade fitting								
	5- Drill only two fwd step holes using DT9616. Ensure proper positioning.								
	6- Drill pilot holes as per Dwg D2750 sheet 4 (D2750-2 details).Drill using drill Jig DT8150 & DT8863A for first side only DT8863B for second side (detail K)								
	7- Clecko DT8863B on second side of tube and drill pilot holes for detail B. ***SECOND SIDE***								
	8-Open up holes for Detail B to 0.375" (4 holes per side)and blade fitting location holes to 0.500" (total of 4 holes per side) as per dwg D2750 .Open up holes for ground handling and detail L to 0.500" (8 holes per side)								
	9-Drill pilot holes for wearplates as per Dwg D2750 using DT8108 open to 0.297".								
	10-Open up holes of Detail A to 0.297" (total of 2 holes per side)								

12-03-13

BB 12/03/13

SAD

BB 12/03/13

W/O:		WORK ORDER CHANGES					
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Run Start

NR1

QC: _____

Date: _____

SPC (Y/N): _____

Date: _____

Stop

NR2

**Sequence ID/
Work Center ID**

**Operation
Description**

**Set Up/
Run Hours**

Tool ID

Tool #

**Plan
Code**

**Accept
Qty**

**Reject
Qty**

**Reject
Number**

**Insp.
Stamp**

11-Weld D2744 Cap as per Dwg D2750 and QSI 004. Fill grooves in bend left
from bending as per QSI 004

A/R Aluminum Rod batch: M120164

12-Grind welds flush as per Dwg D2750



BL 12/03/15

CF

12-3-16

120

QC10- Inspect visual per QSI004- ground welds

0.00

12-03-19

120

QC

Quality Control

130

QC5- Inspect part completeness to step on W/O

0.00

CP 12-03-20

130

QC

Quality Control

Dart Aerospace Ltd

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Tooling:

Date:

Run

Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/
Work Center ID

Operation
Description

140

140

HandFinish

Hand Finishing

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

0.00

26 12-3-20

Memo

0.00

150

150

QC

Quality Control

QC7-Inspect Chemical Conversion Coat

0.00

Memo

0.00

DP 12-3-21

Dart Aerospace Ltd

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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
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Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

160

160

Skidtubes

Skidtubes

Skidtubes

Memo

0.00

1-Open up holes of Detail L and ground handling to 0.625" (total of 8 holes per side) as per dwg D2750.

2-Open up holes of Detail K to 0.750" (total of 4 holes per side) as per dwg D2750.

3-Open float holes to .500" (4 per Side)

4-Chamfer holes of Detail K, L, ground handling and float holes per dwg D2750 (welding instructions on sheet 9)

5-Deburr and blow out all chips from inside of tube

6-Prepare tube for welding, remove alodine as required

7-Bond web D2739 in place as per QSI 015

A/R Sikaflex-291 batch: M12013
exp. date: 12-8-13

8- Weld spacers D3490-1, D3490-3 and D2743 as per dwg D2750 & QSI004 (welding instructions on sheet 9)

A/R Aluminum Rod batch: M12014

9- At section AP-AP drill out x-bolt spacer to .404"

10-Grind welds flush as per Dwg D2750

11-Spot face ground handling holes section (total of 4 places per side) as per

BB/12/03/21

BB/12/03/21

BB/12/03/24

BB/12/03/26

BB/12/03/26

Dart Aerospace Ltd

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	QC: _____	Date: _____	SPC (Y/N): _____	Date: _____	Stop		*NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
	dwg D2750 12-Deburr holes								BB 12/03/12

170 QC10- Inspect visual per QSI004- ground welds

0.00

170

QC

Quality Control

8/12/03/27

180 QC5- Inspect part completeness to step on W/O

0.00

180

QC

Quality Control

8/12/03/27

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES						
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Date:

Run Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

190

190

HandFinish

Hand Finishing

Pressure Wash per QSI005 4.3

0.00

1XPM/12/03/28

Memo

0.00

Re-alodine tube as per QSI 005 section 4.1.2.1 do not acid etch.

200

200

Powdercoat

Powder Coating

White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

0.00

1XPM/12/03/30

Memo

1/30 0.00
START TIME: 320 01
OVEN TEMPERATURE: 320 01
FINISH TIME: 2/30

210

210

QC

Quality Control

QC3- Inspect Part Finish

0.00

1 4 00 11/04/09

Memo

Inspect for foreign object per QSI 024

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Dart Aerospace Ltd

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Approvals:	Process Plan:	Date:	Tooling:	Date:	Run	Start	*NR1*
						Stop	
	QC:	Date:	SPC (Y/N):	Date:			*NR2*

Sequence ID/ Work Center ID	Operation Description	Memo	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
240 *240* QC Quality Control	QC5- Inspect part completeness to step on W/O		0.00	Sidbury						
250 *250* Packaging Packaging	Pick Kit	Memo	0.00							<i>2/4/13 SP</i>
260 *260* QC Quality Control	QC4- 100% Inspect kits for completeness	Memo	0.00	Sidbury						

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
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Required Date: 08/03/2012 **Req'd Qty:** 1.00

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Tooling:

Date:

Run

Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

**Sequence ID/
Work Center ID**

**Operation
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**Set Up/
Run Hours**

Tool ID

Tool #

**Plan
Code**

**Accept
Qty**

**Reject
Qty**

**Reject
Number**

**Insp.
Stamp**

270

270

Packaging

Packaging

0.00

Loc 72

04/14 SP

280

280

QC

Quality Control

QC21- Final Inspection - Work Order Release

0.00

Memo

0.00

12/4/14 SP

012-0414

Dart Aerospace Ltd

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Picklist Print

February-23-12 8:55:59 AM

Page 1

Work Order ID: 80556

Parent Item: D350-636-012

Parent Item Name: Skidtube RH

80556
D350-636-012

Start Date: 23/02/2012

Start Qty: 1.00

Required Date: 08/03/2012

Required Qty: 1.00

Comments:

IPP Rev:I02.09.25Rearranged procedure stepsKJ
 IPP Rev:J 06-03-29 As per Rev D EC
 IPP Rev:K 06-07-13 As per dsi9343 EC
 IPP Rev:L 07-07-28 Added SS Wearplates(Rev E) JLM Verified By:EC
 IPP Rev:M 08-04-22 update steps 4,13 DD verified by:EC
 IPP Rev:N 08-09-23 revF as per dwg DD verified by:ec IPP Rev:O
 10.06.22 revise seq110 DD verf:EC IPP Rev:P 10.10.01 as
 per IIN revH DD verf:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D2600-3-BENT		Manufactured	No			110	Each	17.0000	1	1			

D2600-3-BFNT

Extrusion Bent

B 78497

**

①

KIT 12-03-13

Location

Location	Loc Qty	Loc Code
LG	17	
66875	7	
73253	1	
75021	1	
75022	1	
75023	1	
77623	1	
79497	5	

Dart Aerospace Ltd

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D350-636-012

Parent Item Name: Skidtube RH

Start Date: 23/02/2012

Required Date: 08/03/2012

Start Qty: 1.00

Required Qty: 1.00

D2739

Manufactured No

160

Each

1.0000

1 1

**

D2739

350 I Beam

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
LG 380083	1	
72155	1	

BH 12-03-24

D2743

Manufactured No

160

Each

164.0000

8 8

**

D2743

Crossbolt Spacer

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
LG001	164	
67766	4	
68251	3	
73403	64	
74445	1	
78603	92	

8

BE 12-03-24

D3490-3

Manufactured No

160

Each

46.0000

4 4

**

D3490-3

Cross Bolt Spacer

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
LG001	46	
77567	6	
78800	40	

4

BE 12-03-24

D3490-1

Manufactured No

160

Each

57.0000

4 4

**

D3490-1

Cross Bolt Spacer

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
LG001	57	
62450	2	
74875	4	
77042	8	
78793	43	

4

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Start Date: 23/02/2012
Start Qty: 1.00

Required Date: 08/03/2012
Required Qty: 1.00

D3631-1

Manufactured No

230 Each 223.0000 8 8

**

D3631-1

Washer

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
ST072	223	
68062	2	
75548	221	

m-f 12/04/02

D3791-1

Manufactured No

230 Each 5.0000 1 1

**

D3791-1

Wearplate

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP002	5	
62239	2	
75041	3	

m-f 12/04/02

D3793-3

Manufactured No

230 Each 14.0000 1 1

**

D3793-3

Wearshoe

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP002	14	
78935	14	

m-f 12/04/02

MS21043-6

Purchased No

230 Each 817.0000 4 4

**

MS21043-6

NUT

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FG	20	
103693	20	
ST301	797	
112314	87	
117887	10	
118384	200	
120308	500	

m-f 12/04/02

Dart Aerospace Ltd

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Start Date: 23/02/2012

Required Date: 08/03/2012

Start Qty: 1.00

Required Qty: 1.00

D3794-1

Manufactured No

230 Each 12.0000

1 1

**

D3794-1

Gasket

m-f 12/04/02

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP002	12	
75042 ✓	12	

NAS1611-010

Purchased No

230 Each 167.0000

8 8

**

NAS1611-010

O-RING

m-f 12/04/02
8

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP	50	
110915	0	
120770	50	
FP001	117	
110915	14	
117460	8	
118077	1	
118612	3	
119438	47	
120308	44	

D2741

Manufactured No

250 Each 38.0000

1 1

**

D2741

Blade, 350 Skidtube

12/4/13 ✓ SP

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
ST	-10	
ST466	48	
71856	1	
76984	37	

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
 Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Work Order ID: 80556

80556

Parent Item: D350-636-012

D350-636-012

Parent Item Name: Skidtube RH

Start Date: 23/02/2012

Required Date: 08/03/2012

Start Qty: 1.00

Required Qty: 1.00

NAS1515H3L

Purchased

No

230

Each

220.0000

4

4

**

*NAS1515H3I *

WASHER

m-l 12/04/02

Location	Loc Qty	Loc Code
FG	40	
102472	40	
ST277	180	
118686	3	
119438	1	
120072 ✓	76	4
120360	100	

NAS1611-013

Purchased

No

230

Each

126.0000

8

8

**

NAS1611-013

O-RING

120910

Location	Loc Qty	Loc Code
FP001	126	
116582	5	
117291	2	
117887	53	
119623	36	
120360	30	

8 m-l 12/04/02

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
 Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Work Order ID: 80556***80556***
D350-636-012**Parent Item:** D350-636-012**Start Date:** 23/02/2012**Parent Item Name:** Skidtube RH**Start Qty:** 1.00**Required Date:** 08/03/2012**Required Qty:** 1.00

AN3C6A

Purchased No

230

Each

692.0000

4 4

**

AN3C6A

BOLT

m-f 12/04/02

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP001	1	
111982	1	
ST351	691	
111982	2	
116419	23	
116549	2	
116704	12	
117619	10	
117688	1	
117872	5	
118422	13	
119449	21	
120423 ✓	202	
120693	400	

NAS1149C0832R

Purchased No

230

Each

305.0000

1 1

NAS1149C0832R

WASHER

m-f 12/04/02 ✓

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
ST297	305	
114915 ✓	305	

D3536-25

Manufactured No

230

Each

16.0000

1 1

D3536-25

Gasket

m-f 12/04/02 ✓

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP002	16	
78902 ✓	16	

W/O:		WORK ORDER CHANGES							
DATE	STEP	PROCEDURE CHANGE			By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)							
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector	
			Initial Chief Eng	Action Description Chief Eng	Sign & Date				

NOTE: Date & initial all entries

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Work Order ID: 80556

80556
D350-636-012

Parent Item: D350-636-012

Parent Item Name: Skidtube RH

Start Date: 23/02/2012

Required Date: 08/03/2012

Start Qty: 1.00

Required Qty: 1.00

D3794-3

Manufactured No

230

Each

7.0000

1

1

**

D3794-3

Gasket

m-f 12/04/02

Location	Loc Qty	Loc Code
FP002	7	
74530	2	
78895 ✓	5	

AN3C5A

Purchased No

230

Each

1,030.000

34

**

AN3C5A

Bolt

m-f 12/04/02

Location	Loc Qty	Loc Code
FP001	7	
115835	7	
ST350	1023	
116419	28	
117343	13	
117764	7	
117872	2	
119127	20	
119749	23	
120423 ✓	930	

D3537-1

Manufactured No

230

Each

69.0000

3

**

D3537-1

Wearpad

m-f 12/04/02

Location	Loc Qty	Loc Code
FP001	58	
78592	58	
FP002	11	
69817	5	
78591	6	

79835

3

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
 Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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Picklist Print

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Work Order ID: 80556

80556
D350-636-012

Parent Item: D350-636-012

Parent Item Name: Skidtube RH

Start Date: 23/02/2012

Required Date: 08/03/2012

Start Qty: 1.00

Required Qty: 1.00

D3535-25

Manufactured No

230

Each

6.0000

1

1

**

D3535-25

Wearshoe

Location	Loc Qty	Loc Code
FP001	1	
62233	1	
FP002	5	
77617✓	5	

m-f 12/04/02

D3492-3

Manufactured No

230

Each

77.0000

8

8

**

D3492-3

Plug

Location	Loc Qty	Loc Code
FP002	1	
77039	1	
FP-A	76	
78600 ✓	76	

m-f 12/04/02

AN960C10L

NAS1149C0332 R

Purchased No

230

Each

0.0000

38

38

118 354

**

*AN960C10L *

washer

D3488-042

Manufactured No

230

Each

20.0000

1

1

**

D3488-042

Blade Fitting Assembly, RH

Location	Loc Qty	Loc Code
FP002	20	
62003	1	
71883	1	
75068 ✓	9	
77015	9	

m-f 12/04/02

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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Work Order ID: 80556

80556

Parent Item: D350-636-012

D350-636-012

Parent Item Name: Skidtube RH

Start Date: 23/02/2012

Required Date: 08/03/2012

ALS4-1032-225

Purchased

No

230

Each

1,286.000

38

38

**

AI S4-1032-225

Insert

m-f 12/04/02

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
-----------------	----------------	-----------------

ST281	1031	
108696	146	
110768	62	
118386	55	
118966	68	
120671 ✓	700	
ST282	255	
120410	150	
120451	105	

D3492-1

Manufactured

No

230

Each

138.0000

8

8

**

D3492-1

Plug

m-f 12/04/02

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
-----------------	----------------	-----------------

FP002	138	
69531	8	
74444	2	
76235	28	
77037 ✓	100	

D3793-1

Manufactured

No

230

Each

18.0000

1

1

**

D3793-1

Wearshoe

m-f 12/04/02

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
-----------------	----------------	-----------------

FP001	18	
77029 ✓	6	
78901	12	

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
 Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Work Order ID: 80556

80556
D350-636-012

Parent Item: D350-636-012

Parent Item Name: Skidtube RH

Start Date: 23/02/2012

Required Date: 08/03/2012

Start Qty: 1.00

Required Qty: 1.00

AN8C35A

Purchased

No

230

Each

66.0000

1

1

**

AN8C35A

BOLT

m-k 12/04/02

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
-----------------	----------------	-----------------

FP002	65	
-------	----	--

115960	1	
--------	---	--

117834	10	
--------	----	--

118286 ✓	54	
----------	----	--

ST346	1	
-------	---	--

114442	0	
--------	---	--

115188	0	
--------	---	--

115960	1	
--------	---	--

MS21083C8

Purchased

No

230

Each

67.0000

1

1

**

MS21083C8

NUT

m-k 12/04/02

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
-----------------	----------------	-----------------

FP002	1	
-------	---	--

115884	1	
--------	---	--

ST303	15	
-------	----	--

115884	0	
--------	---	--

118077	1	
--------	---	--

119309	2	
--------	---	--

119436 ✓	10	
----------	----	--

119638	2	
--------	---	--

ST304	51	
-------	----	--

120142	26	
--------	----	--

120731	25	
--------	----	--

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

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Work Order ID: 80556

80556

Parent Item: D350-636-012

D350-636-012

Parent Item Name: Skidtube RH

Start Date: 23/02/2012

Required Date: 08/03/2012

Start Qty: 1.00

Required Qty: 1.00

D2745

Manufactured No

230

Each

48.0000

8

8

**

79518

D2745

Bushing

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP001	48	
69529	1	
76142	1	
78597 ✓	46	

AN6C44A

Purchased No

230

Each

98.0000

4

**

2

AN6C44A

BOLT

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FG	2	
103964	2	
ST343	96	
120095	16	
120143	25	
120465	27	
120641 ✓	28	

D3532-1

Manufactured No

250

Each

39.0000

2

**

2

D3532-1

Spacer

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
ST053	39	
78839	39	

2

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

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Work Order ID: 80556

80556

Parent Item: D350-636-012

D350-636-012

Parent Item Name: Skidtube RH

Start Date: 23/02/2012

Required Date: 08/03/2012

Start Qty: 1.00

Required Qty: 1.00

MS21083C8

Purchased

No

250

Each

67.0000

2

2

**

MS21083C8

NUT

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP002	1	
115884	1	
ST303	15	
115884	0	
118077	1	
119309	2	
119436	10	
119638	2	
ST304	51	
120142	26	
120731	25	

NAS1149D0863J

Purchased

No

250

Each

231.0000

2

**

NAS1149D0863J

WASHER

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
ST298	231	
118078	36	
119307	95	
120308	100	

D3493-1

Manufactured

No

250

Each

26.0000

2

**

D3493-1

Washer

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
ST050	26	
70697	2	
77573	24	

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

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Work Order ID: 80556

80556

Parent Item: D350-636-012

D350-636-012

Parent Item Name: Skidtube RH

Start Date: 23/02/2012

Required Date: 08/03/2012

Start Qty: 1.00

Required Qty: 1.00

AN8C21A

Purchased

No

250

Each

47.0000

2

2

**

121613 sf

SP

~~*AN8C21A*~~
BOLT

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
ST343	47	
118758	5	
120094	42	

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
 Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

QTY -041	QTY -042	QTY -043	QTY -044	PART NUMBER	DESCRIPTION
X				D2750-041	350 SKIDTUBE ASSEMBLY, LH
	X			D2750-042	350 SKIDTUBE ASSEMBLY, RH
	X			D2750-043	350 SKIDTUBE ASSEMBLY, LH
	X			D2750-044	350 SKIDTUBE ASSEMBLY, RH
1	1	1	1	D2739	WEB
8	8	8	8	D2743	SPACER
1	1	1	1	D2744	CAP
8	8	8	8	D2745	BUSHING
1				D2750-1	SKIDTUBE WELDMENT, LH
	1			D2750-2	SKIDTUBE WELDMENT, RH
		1		D2750-3	SKIDTUBE WELDMENT, LH
			1	D2750-4	SKIDTUBE WELDMENT, RH
1		1		D3488-041	BLADE FITTING, LH
	1		1	D3488-042	BLADE FITTING, RH
4	4	4	4	D3490-1	SPACER
4	4			D3490-3	SPACER
	4	4		D3490-5	SPACER
8	8	8	8	D3492-041	PLUG ASSEMBLY
8	8			D3492-043	PLUG ASSEMBLY
		8	8	D3492-045	PLUG ASSEMBLY
1	1	1	1	D3535-25	WEARSHOE
1	1	1	1	D3536-25	GASKET
3	3	3	3	D3537-1	WEARPAD
8	8	8	8	D3631-1	WASHER
1	1	1	1	D3791-1	WEARPLATE
1	1	1	1	D3793-1	WEARSHOE
1	1	1	1	D3793-3	WEARSHOE
1	1	1	1	D3794-1	GASKET
1	1	1	1	D3794-3	GASKET
38	38	38	38	ALS4-1032-225	INSERT (OR ALS7-1032-225, AKS4-1032-225, AELS-1032-225)
34	34	34	34	AN3C5A	BOLT
4	4	4	4	AN3C6A	BOLT
4	4	4	4	AN6C44A	BOLT
1	1	1	1	AN8C35A	BOLT
38	38	38	38	AN960C10L	WASHER
1	1	1	1	AN960C816L	WASHER
4	4	4	4	MS21043-6	NUT
1	1	1	1	MS21083C8	NUT
4	4	4	4	NAS1515H3L	WASHER

GENERAL NOTES:

- 1) MATERIAL: MAKE D2750-1/-2/-3/-4 FROM D2600-3 EXTRUSION (INITIAL LENGTH = 120.0).
- 2) FINISH:
ACID ETCH, ALONDE ASSEMBLY PER DART QSI 005 4.1 PRIOR TO INSTALLING D2739 WEB.
POWDER COAT WHITE (REF. 4.3.5.1) PER DART QSI 005 4.3
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: D2750-041/-042/-043/-044 = 26.5 LBS
- 8) WELD PER DART QSI 004
- 9) INSTALL ALS4-1032-225 INSERTS AFTER FINISH AS INDICATED. DRILL 'F' SIZE HOLES ($\phi 0.297$) FOR WEARSHOE INSERTS
- 10) FINAL CONFIGURATION SHOULD HAVE THE FOLLOWING MINIMUM MECHANICAL PROPERTIES:
MINIMUM YIELD TENSILE STRENGTH = 35 KSI
MINIMUM ULTIMATE TENSILE STRENGTH = 38 KSI
- 11) SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES "LPS-3" AFTER FINISH AND AFTER INSTALLATION OF INSERTS.
COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF POWDER COATING WITH MEK DEGREASER.
- 12) SPACER AND PLUG INSTALLED SAME AS SECTION AJ-AJ EXCEPT HORIZONTAL 
- 13) SPACER AND PLUG INSTALLED SAME AS SECTION AP-AP EXCEPT HORIZONTAL 

10-80556 M.C.J
12/02/23

RELEASED *(Signature)*

F	INCORPORATE DS19413; QTY (3) D3537-1 WAS QTY (5) (ZN C8-1); D3791-1/3 REPLACES D3535-13/35 (ZN C8-1); D3794-1/3 REPLACES D3536-13/35 (ZN B8-1); ADD D3791-1 (ZN C8-1); RECALL HOLLOW UNDER FWD/ AFT SADDLE REMOVED (8 PL). WEARSHOE HARDWARE UPDATED (ZN B8-1); D3488-041/042 HARDWARE UPDATED (ZN C1-8, 9, 10, 11); ADD NOTE 12 AND 13 (ZN A8-1); REASON: REF. NCR 08-043	PH	08.07.16
E	CHANGE TO STAINLESS STEEL WEARPLATES; ADD RUBBER GASKETS; CHANGE INSERTS; ADD D3631-1; REMOVE QTY (3) NAS1515H3L; REMOVE D2741, QTY (2) AN960C816; REMOVE QTY (2) MS21083C8	CB	07.05.17
D	ADD HOLES AND SPACERS FOR APICAL FLOATS; INCORPORATE DEO 9133/9157	PH	06.01.05
C	ADD D2750-3/D2750-4; INCORPORATE D2738 AND D2740	CP	98.11.18
B	CHANGE MS24694-S293 TO AN8-16A	CP	98.09.01
A	NEW ISSUE	DS	98.04.16
REV.	DESCRIPTION	BY	DATE
DESIGN	RH	DART AEROSPACE USA, INC.	
DRAWN	RH	PORT HADLOCK, WA	
CHECKED	RH	DRAWING NO.	REV. F
MFG. APPR.	AC	D2750	SHEET 1 OF 11
APPROVED	AC	TITLE	SCALE
DE APPR.	AC	350 SKIDTUBE ASSEMBLY	NTS
DATE	08.07.16	COPYRIGHT © 1998 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

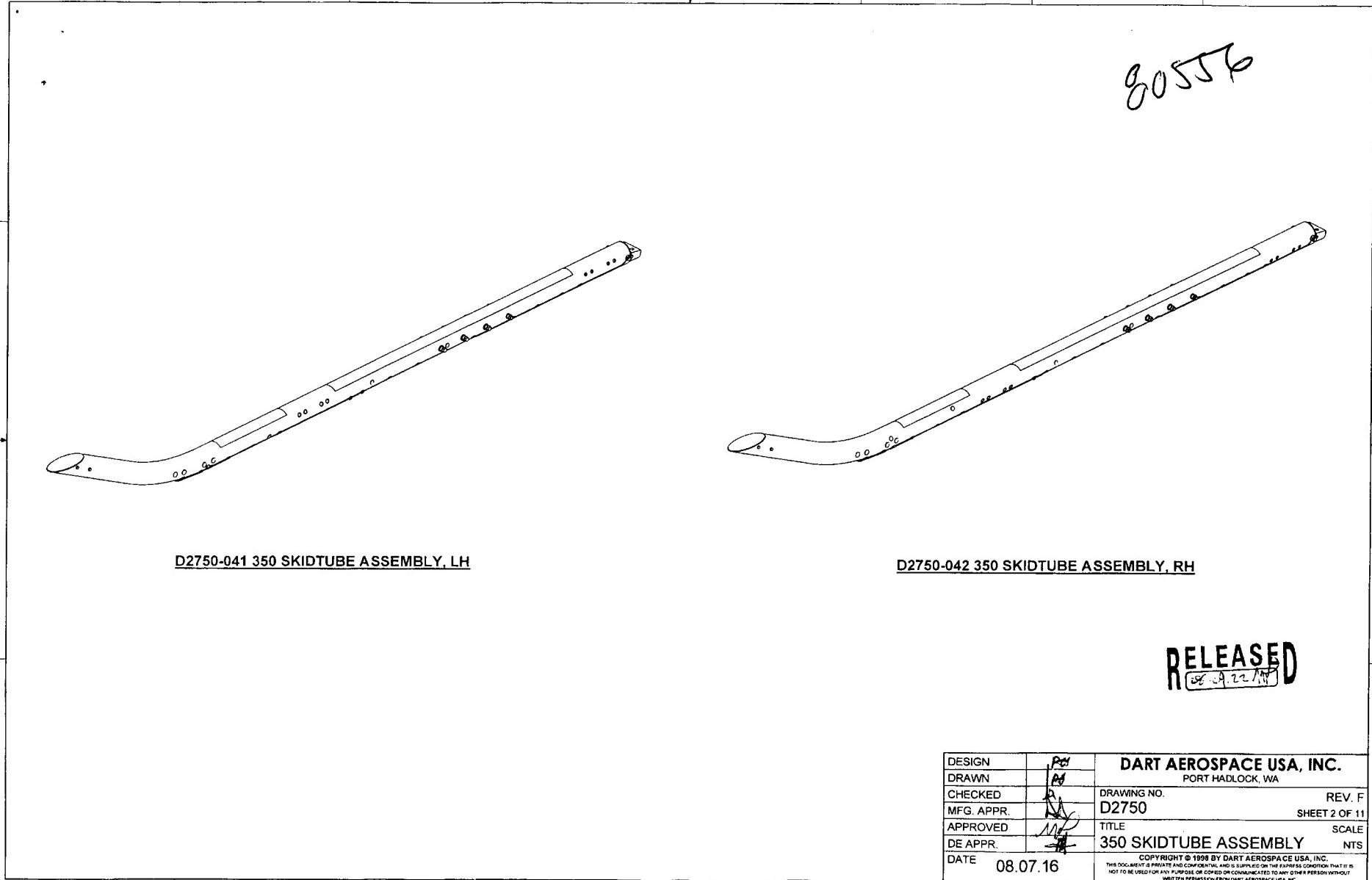
Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
 Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

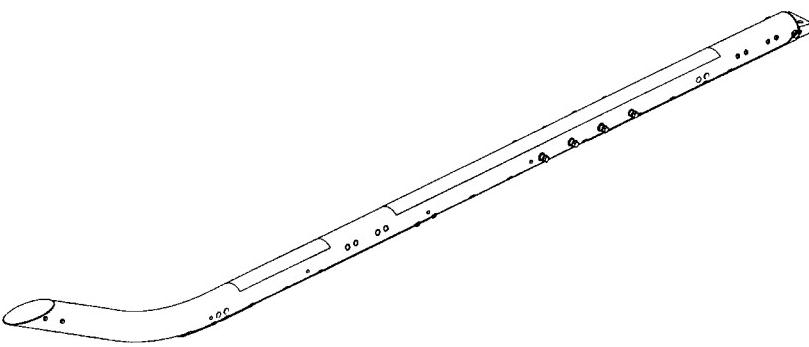
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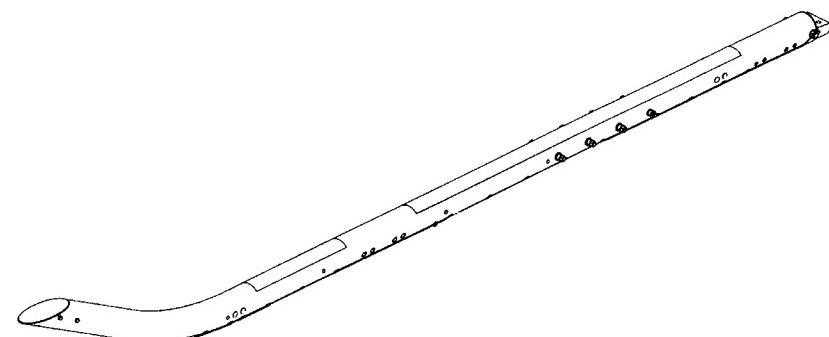
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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

80556



D2750-043 350 SKIDTUBE ASSEMBLY, LH



D2750-044 350 SKIDTUBE ASSEMBLY, RH

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DRAWN	<i>Pd</i>	PORT HADLOCK, WA
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DE APPR.	<i>H</i>	TITLE
DATE	08.07.16	SCALE
		350 SKIDTUBE ASSEMBLY
		NTS

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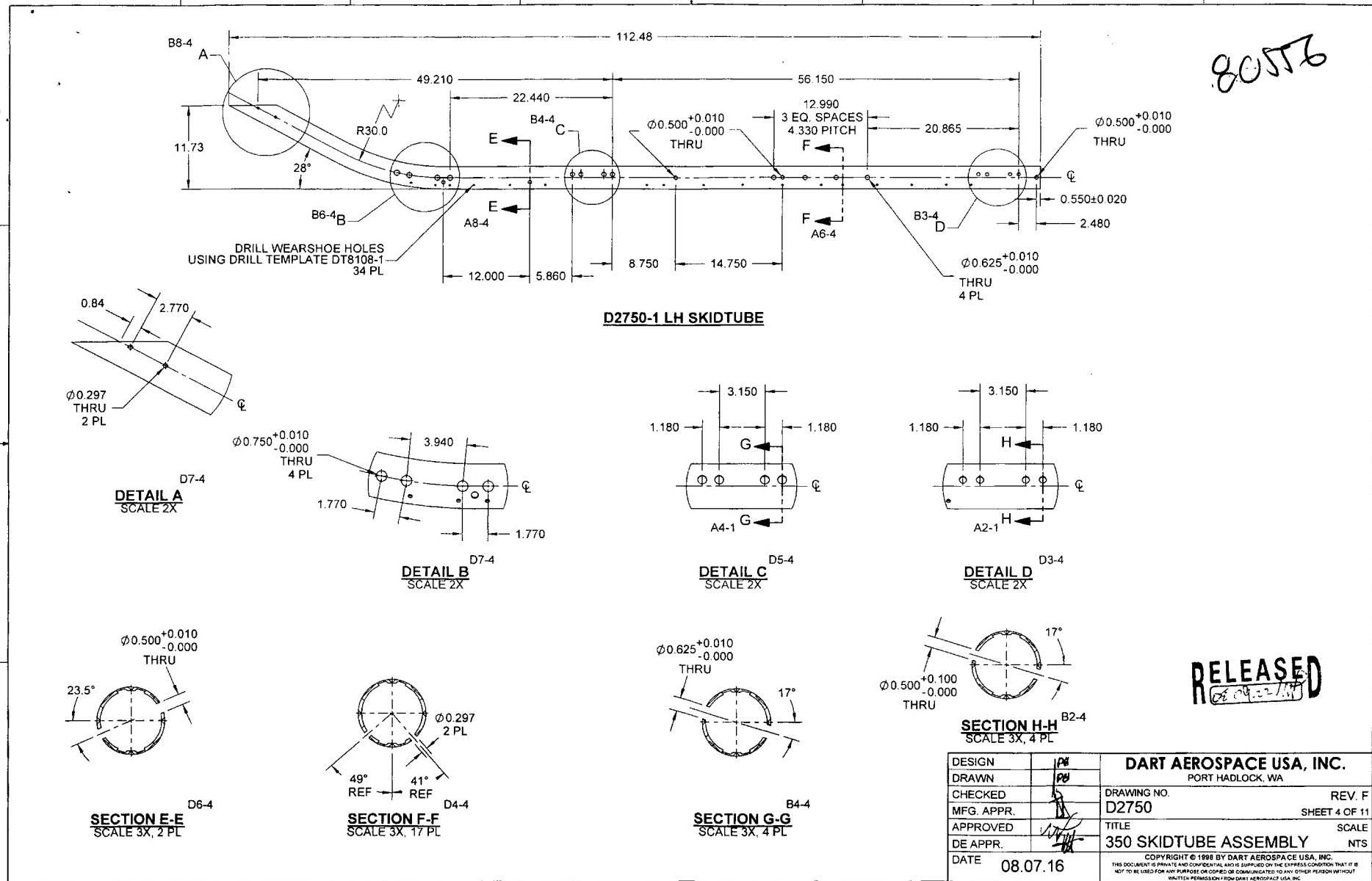
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



DESIGN	IP	DART AEROSPACE USA, INC.
DRAWN	IP	PORT HADLOCK, WA
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MFG. APPR.		SHEET 4 OF 11
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DE APPR.		SCALE
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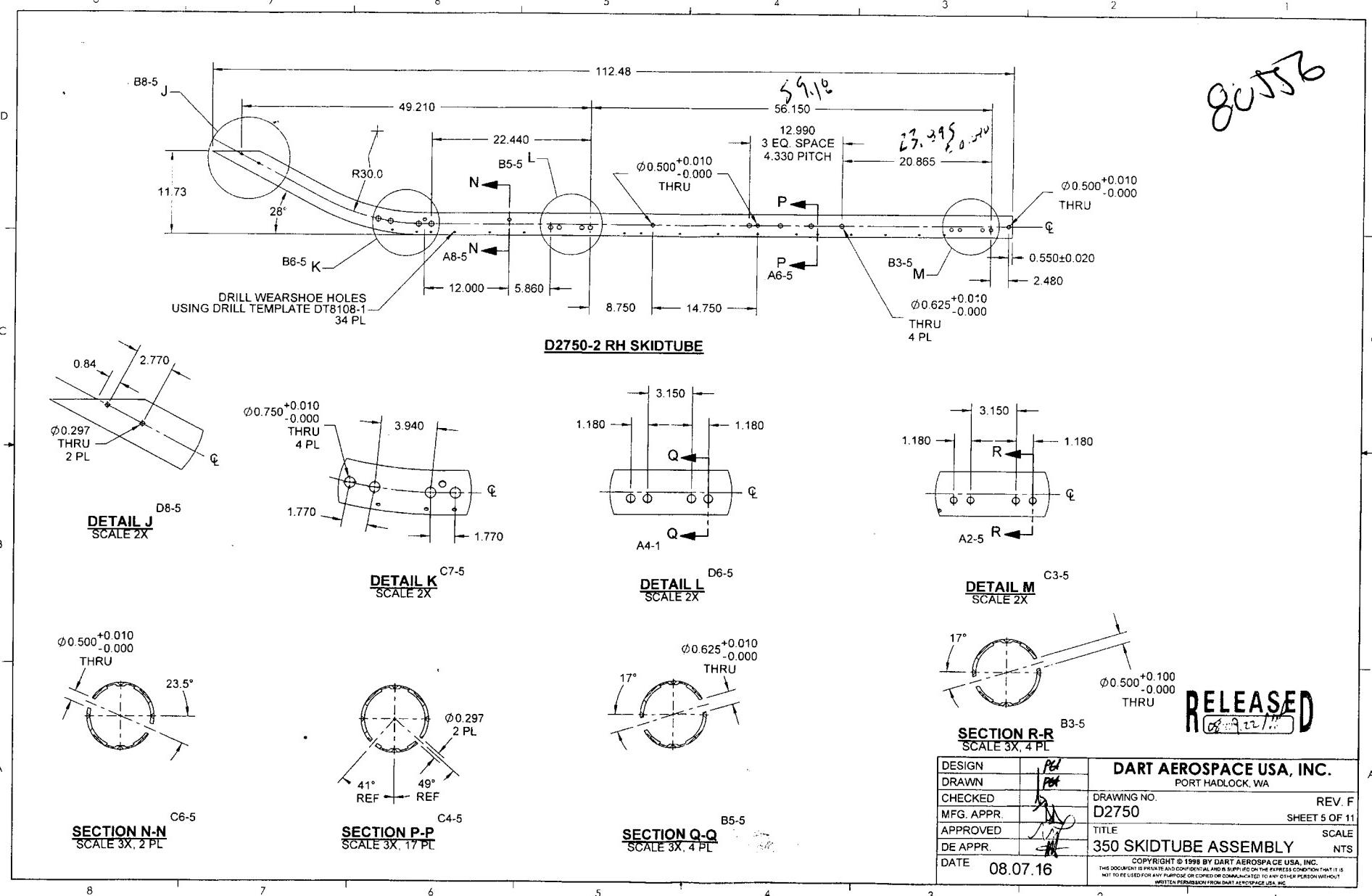
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MFG. APPR.	<i>b</i>	D2750	SHEET 5 OF 11
APPROVED	<i>L</i>	TITLE	SCALE
DE APPR.	<i>L</i>	350 SKIDTUBE ASSEMBLY	NTS
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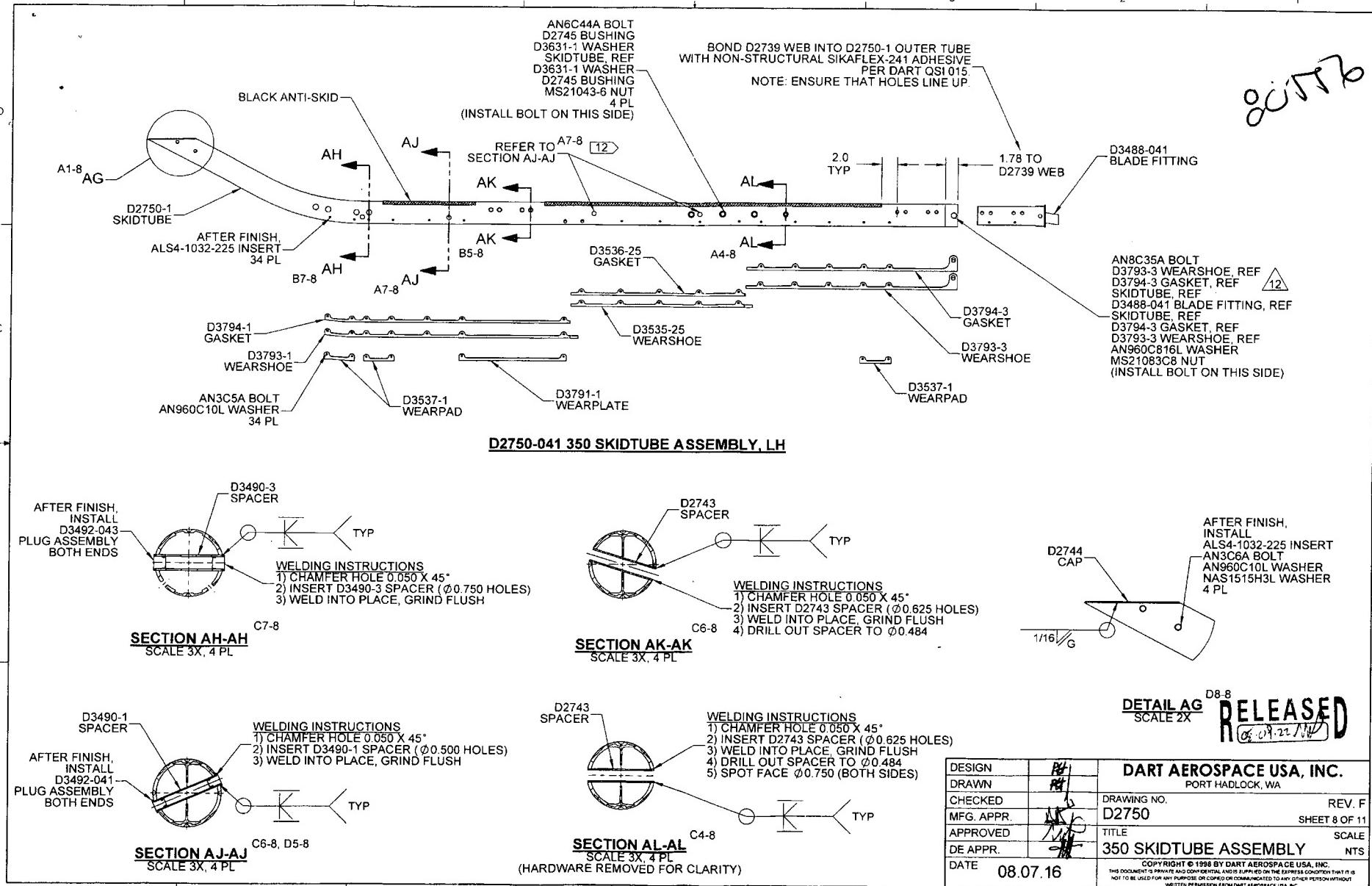
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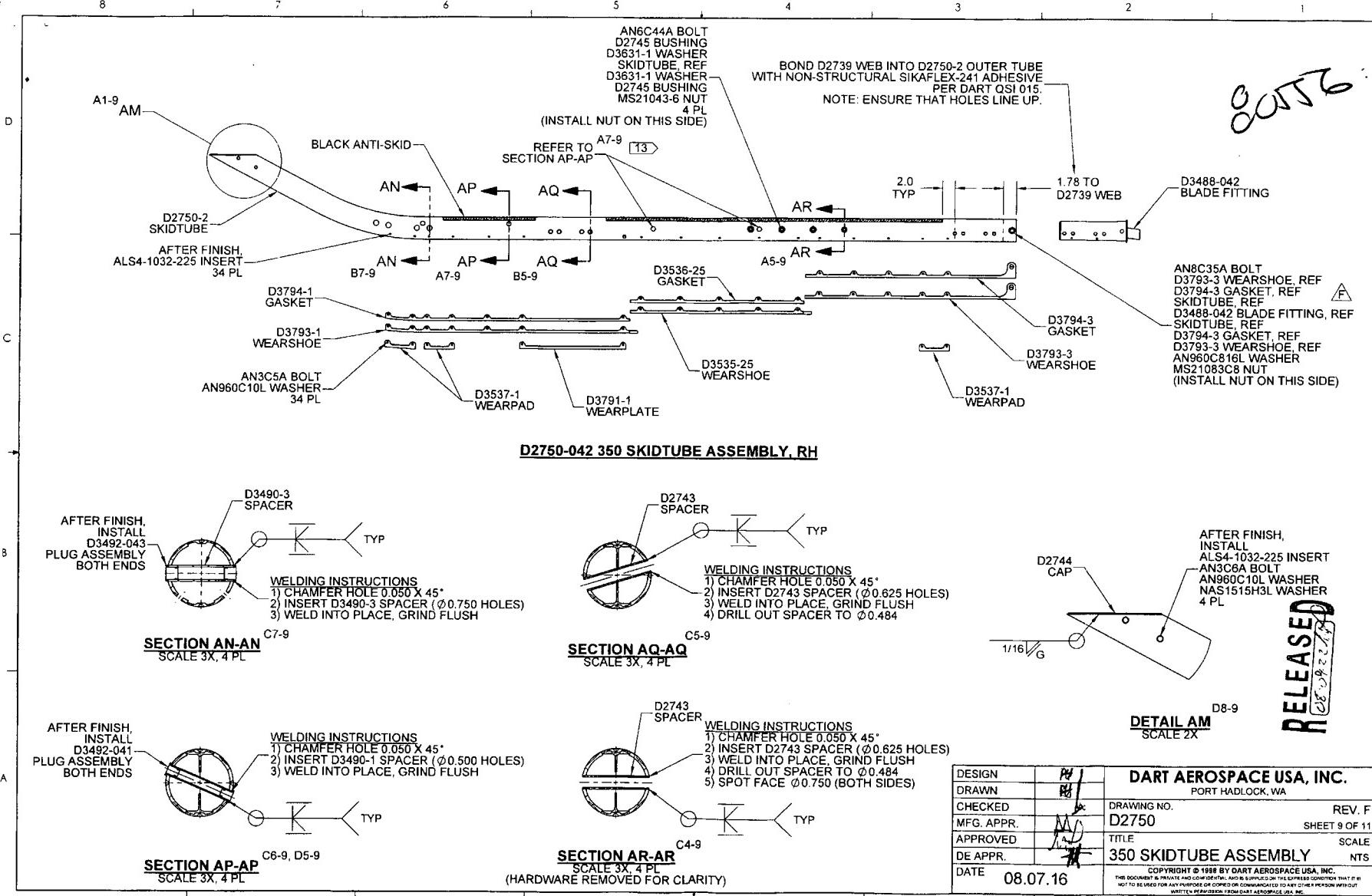
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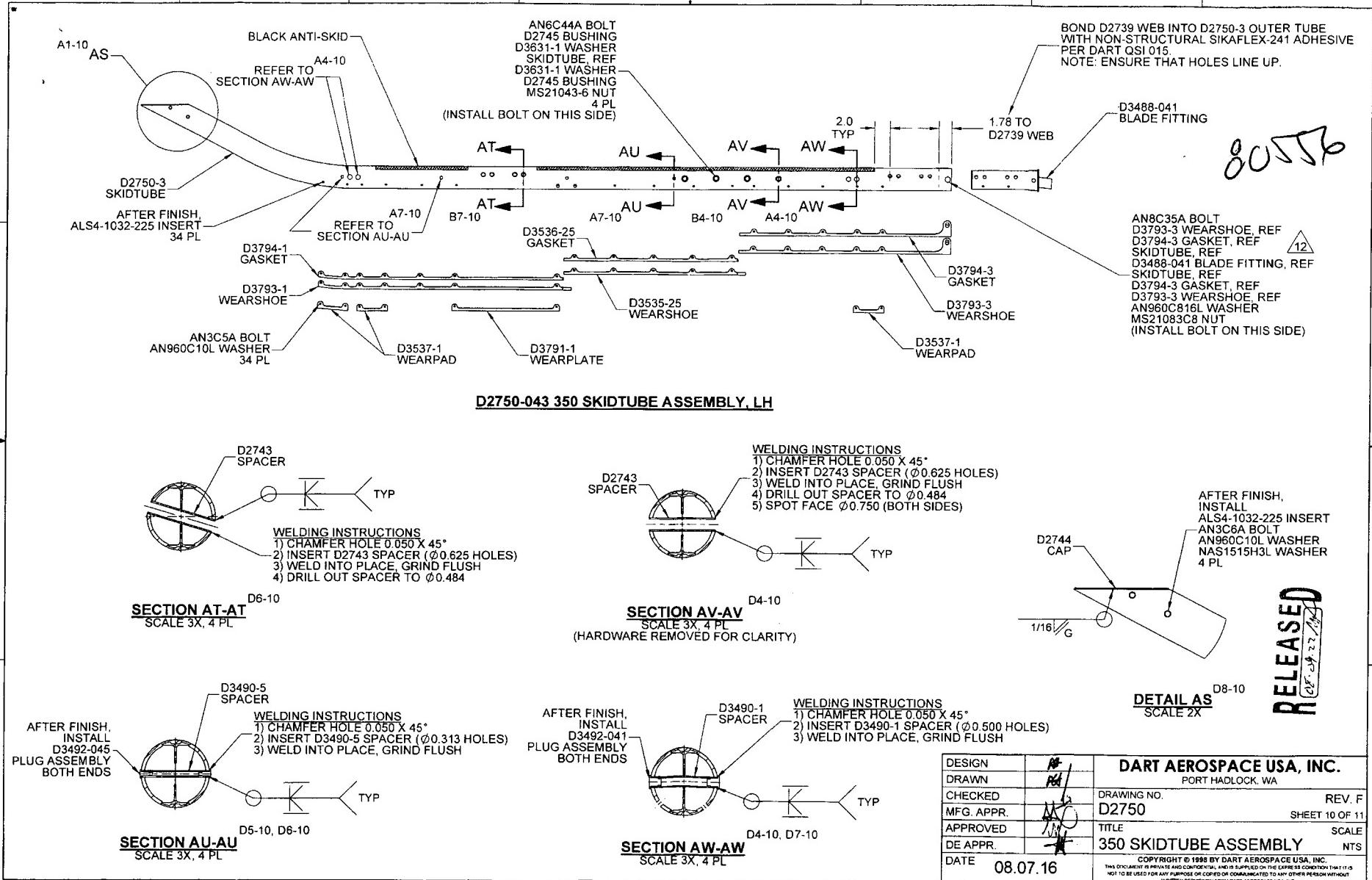
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DART AEROSPACE USA, INC.
PORT HADLOCK, WA

DRAWING NO. D2750 **REV. F**
SHEET 10 OF 11

TITLE 350 SKIDTUBE ASSEMBLY **SCALE** NTS

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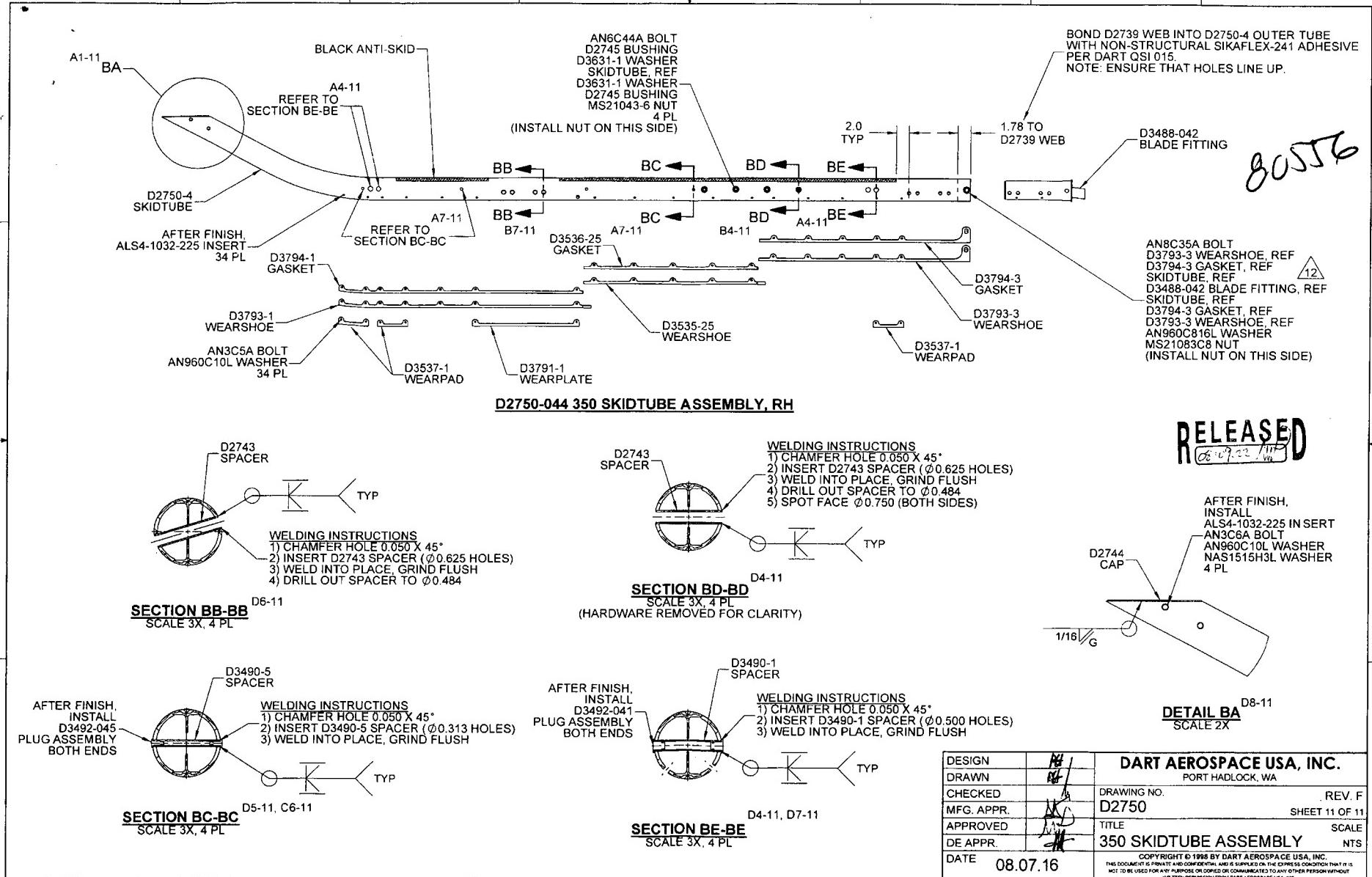
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NOTE: Date & initial all entries

NO. 282

AWS D17.1.2001
QUALIFICATION TEST RECORD

Name: Barclay Elliott
Job number: 78413
Part number: A350-636 -011
Description: Skid tube
Welding Process: Tig[] Mig[]
Base materiel: Aluminium
Current: AC[] DC[]

TEST REQUIREMENTS AND RESULTS

Visual: pass[] fail[]
Penetration: pass[] fail[]

UNACCEPTABLE

Cracks: pass[] fail[]
Undercut: pass[] fail[]
Pin holes: pass[] fail[]
Overlap (cold lap) pass[] fail[]
Porosity (surface): pass[] fail[]
Coloration: pass[] fail[]

Qualifier David Newell Date of Test Coupon 12.02.01

Welder Barclay Elliott Date of Test Coupon 12.02.01

The above named individual is qualified in accordance with AWS D17.1.2001 to weld